JEFFREY W. WRIGHT

Intelligence and Economic Security

Should the United States government assist business activities in competing for foreign markets and protect domestic markets from unfair competition? This is a fair question to raise today as the Cold War fades and the economy of the United States clearly faces fundamental changes. These changes can come happenstance, driven by the desire to cash in on the "peace dividend" that some say will burst forth from major reductions in the defense budget. Or changes can come by careful, innovative planning that recognizes the strategic importance of a powerful, secure, and growing United States economy. Surely the national interest now requires a fresh look at how much the government should involve itself in the marketplace at home and overseas. The government's role in nurturing and protecting commerce and business will be rigorously debated in the 1990s when a new economic order develops as a result of the collapse of communism in Eastern Europe, the stunning military defeat of Iraq by the United States-led coalition, the continued rise of the Pacific Rim nations, and the maiden voyage of the European Community in 1992.

An issue central to this debate is whether (or to what extent) intelligence resources, especially those of the Department of Defense, should be used to support and protect commerce.

INTELLIGENCE IN SUPPORT OF COMMERCE

The idea of using intelligence to support commerce certainly tests moral, political, and practical grounds. William Safire, writing in *The New York Times*,

Lt. Colonel Wright is a Research Fellow at the National Defense University in Washington, D.C. He is also Branch Chief for Electronic Warfare C_3CM, Counter Measures for Director of Operations, Joint Staff, Pentagon.

has raised the central issue: "In the bipolar thaw, allies will be spying on us: should we be spying on them? For example, is it in America's interest to know the status of Japan's investment in biotech, as Tokyo hires scores of consultants to learn ours — or is this a form of industrial policy we should declare immoral and illegal?"[1]

If we assume that Japan, Britain, France, the USSR, and other nations will not hesitate to martial the full assets of their governments, including intelligence assets, to support their nation's economic vitality, should the United States not do likewise? Espionage and intelligence collection are primary tools in the economic portfolios of many nations, both friend and foe. According to Senator David Boren (D., Okla.), the chairman of the Senate Select Committee on Intelligence, economic espionage is on the rise:

> If you doubt that we are shifting from military competition primarily to economic competition, look at the targets for foreign intelligence operations. It's very interesting, but as the arms race is winding down, the spy race is heating up. And where is the growth area in this espionage activity? Not by foreign companies, but by foreign governments. It's against private commercial targets in the United States. More and more the increase in espionage is to steal our commercial secrets for the sake of national economic purposes, as opposed to the theft of military secrets to build military strengths relatively in other countries.[2]

Let us further assume that the promotion of commerce as well as the control of commerce is a government function. Government ought, therefore, to apply all legally available resources to the end of promoting commerce; it would be in the national interest to do so. The authors of *Megatrends 2000* clearly make that assumption: "In the Global Economy, economic considerations almost always transcend political considerations." And they conclude, "It is now clear that the 1980s was the decade when economics became more important than ideologies."[3] Soviet President Mikhail Gorbachev must be numbered among those who subscribe to such a "Global Economy."

As the world economic order changes, countries such as Japan are competing economically using a different set of rules: while they are playing soccer we are playing football on the same field at the same time. The figure of a totally level playing field or "free market" in world commerce is mythical. Each nation tries to tilt the playing field in its favor. Japan had a $49 billion dollar trade surplus with the United States in 1989 — some of it the result of playing by different economic rules internationally and keeping its economy relatively closed nationally.[4] Because the United States has not yet begun playing by Japanese rules, U.S. industries are failing to keep pace with Japanese in product innovations, productivity, and quality, especially in the automobile industry. This failure contributes further to the trade imbalance.

Japan is nonetheless a friendly country and a very important ally. In reaction to just criticism of its markets being closed to foreign products, documented cases of product dumping, and predatory business practices, Tokyo reached a trade agreement in 1990 with the United States, which if honored will be a major step toward improving trade between the key Pacific trade partners.[5] Because Japan and the United States are the linchpins of the world economy, a trade war could only damage the health of that economy. Japan also fills a key role in providing foreign aid and economic assistance to developing nations. For all these reasons, the U.S. government should monitor and analyze the economic and commercial activities of Japan in the 1990s with the thoroughness and diligence that it monitored the Soviet Union in the 1970s and 1980s.

In the case of Japan, the United States certainly must question whether it has, as a nation, competed smartly. Washington knows that Japan — by dumping products and using other predatory practices in the United States while keeping its domestic markets closed to many segments of U.S. commerce — has not competed fairly. But how does the United States make up for this disadvantage in smartness and competitive fairness? Improved worker and manager productivity, quality control of products, and improved domestic savings and investment rates all help, but an additional way to even up the playing field or perhaps tilt it in Washington's favor is to increase the use of intelligence assets to monitor foreign economic activities and research and development initiatives. Former CIA Director William Webster recognized that the United States will take to the playing field as both referee and competitor:

> It is the job of intelligence to examine what is occurring, the forces at play, and the ways that actions taken abroad can affect our national security interests. With a clear understanding of the playing field, policymakers can better determine whether or not it is level as far as U.S. interests are concerned. And understanding the capabilities and intentions of competitors will assist our policymakers in deciding how our nation will play. I think it is very important for us to recognize that other countries may not be playing by rules we would necessarily advance. The better we understand this, the better position we will be in. This may not affect our own rules of play, or our own standards, but it certainly affects the stakes, the outcome, and even the decision of whether to play in that particular economic area.[6]

Furthermore, the United States has been lax in efforts to control industrial espionage and market crimes by agents of foreign governments and foreign companies. One of the best recent examples of intelligence in support of the detection of a market crime came in the 1987 revelations that the Toshiba Corporation had sold to the Soviet Union equipment and technology to help make submarines run more quietly.[7] Even though the intelligence information did not

head off the Japanese initiative, it allowed the United States to take sensible measures afterwards.

A debate over the use of governmental intelligence for commerce is in progress. CIA Director Webster (in an April 1990 speech) made it clear, "There is now universal recognition that economic strength is key to global influence and power. . . . Throughout the next decade, we will continue to see an increased emphasis on economic competitiveness as an intelligence issue."[8] Senator Boren agreed:

> When you look at the targets for intelligence against the United States — [foreign] government intelligence services shifting to economic sources — we're going to have to develop economic skills within the intelligence community. We're going to have to know about intentions about oil production levels and exchange rates and trade policy. We're going to have to protect our own commercial enterprises against the theft of commercial secrets. We're going to have to begin to think about the role that we want our own intelligence services to play in terms of protecting America's economic and commercial interests around the world.[9]

The statements by Webster and Boren sent an unambiguous message to other industrialized nations that, though the United States may lack a national industrial policy and a governmentally managed economy, its policymakers *are* prepared to protect and promote America's economic interests.

NATIONAL SECURITY IMPLICATION OF WORLD ECONOMIC CHANGES

American policymakers today face a growing range of issues with national security implications — technology transfers, espionage against U.S. businesses, problems of trade balance, control of debt, sophisticated and newly integrated financial markets, and multinational ownership of business, commerce, and industry. These are all difficult problems that require the full attention of the government in a global economy, but perhaps the most serious are the integrated markets and multinational ownership. DCI Webster recognized the instability these problems generate:

> Traditional distinctions have been blurred between domestic and international markets, between the different kinds of financial transactions, and even between who is a market participant and who is not. The transformation of international financial markets is clear when you look at the numbers: foreign exchange transactions now exceed 300 billion dollars per day, and one week of funds transferred on the international market is larger than the size of the third world debt. The number of international banks is now in the hundreds, up from just a handful in the 1970s; and new financial instruments, such as

> currency and interest rate swaps, are growing in the market faster than either the traders or the regulators can fully understand them.[10]

The realities of the global economy have spurred companies to become international or sign agreements with similar companies in other countries to gain access to advanced technologies, gain a foothold in foreign markets such as EC 92, and spread financing risks and costs. A recent example is Boeing Aircraft's working closely with Japanese industry to produce a new generation of airliners, the 767-X. Japanese industry will hold about a ten percent share — this is the greatest percentage of participation that Boeing ever has allowed another entity, particularly a foreign entity, in a commercial transport effort.[11] Another example is the agreement between Mitsubishi, the largest industry group in Japan, and West German industrial giant Daimler-Benz on cooperative aerospace research ventures. Such linkups by large, privately-held corporations put particular pressure on nationalized companies such as France's Aerospatiale, which are more constrained in seeking international business agreements.[12] They also put more pressure on the French government to find ways to keep the company competitive against international conglomerates.

For all of the benefits of the global economy, negative aspects with national security implications also exist. One example is Japan's penchant for trying to buy and control U.S. semiconductor toolmaking firms such as Perkin-Elmer and Semi-Gas. (Semiconductors are critical components of high technology computer, military, and telecommunication systems.) U.S. defense interests would be clearly at stake if Japan or any other foreign government or multinational corporation were to gain control of this industry.[13] Another example is the potentially adverse effect on the United States of the unification of West German and East German currencies. American policymakers are concerned about how generous the exchange will be. If Bonn increases its money supply, this would cause inflation in a united Germany — with interest rates rising in Europe's economically most important country — making it harder for the Federal Reserve to lower rates.[14] Such uncertainty is motivation enough for President Bush, Secretary of State James Baker, Commerce Secretary Robert Mosbacher, and then-DCI Webster to seek economic intelligence about potential damage to the U.S. economy from German currency unification.

Economic or political developments in one country, one region, or one industry have worldwide implications, now more and more rapidly transmitted throughout the world. Such developments, even rumors of such developments, can send financial markets on a roller coaster ride. Director Webster again:

> Just a few years ago, a rumor spread through the market that there would be an emergency "Group of Five" meeting to stabilize the U.S. dollar. Within 30 minutes the deutsche mark and the yen dropped more than two percent against the dollar. Given the size of outstanding foreign exchange positions,

> the drop represented a shift in wealth of about 1 billion dollars on the market. Sudden shifts in exchange rates as a result of political events can stimulate further speculative attacks on a country's currency — quickly draining foreign exchange reserves if a government chooses to insulate itself from currency changes.[15]

Clearly, groups and governments are now capable of using international financial markets for their own ends — ends that may destabilize the global economy and threaten national security interests. To determine the national identities of companies in many important industries and on many important projects is becoming much more difficult. It is also becoming much harder to tie national interests to corporate interests and the directions of global markets. Add to this uncertainty the implications of third world debt, narco-dollars, gray arms purchases, international lending to rebuild Eastern Europe, trade imbalances, the relentless quest for technologies — especially nuclear technologies — by hook or crook, and declining U.S. market shares in many industries, and it is easy to understand the concerns expressed by William Webster.

President Bush, himself a former Director of Central Intelligence, recognizes the need to keep an eye on *economic* rivals as well as military adversaries. Clearly, economic intelligence is one of the measures that U.S. policymakers will use to protect its national interests where economic matters are of strategic importance. How to respond to the reality of a rival's ability to capture and control markets will be as important as national efforts in arms reductions and defense.

PROMOTING AND PROTECTING THE ECONOMY IN A CHANGING WORLD

For the last 50 years the principal focus of the United States has been on its military adversaries. Although the United States has prevailed in these struggles, the commonplace bromide is that it lost the peace to Japan and Germany. Now that the West has prevailed in the Cold War and in the Gulf War in the Middle East, may we expect to hear that bromide repeated about the peace in the 1990s? John Naisbitt and Patricia Aburdene point out an interesting fact in *Megatrends 2000*, "Among the world's forty-four richest countries there has been no war since 1945."[16] That is, none of those richest countries was directly at war with another rich country. While superpowers tested each other in places like Southeast Asia, many of these rich countries were free to develop economically. Because of alliances with the United States and the security of a U.S. nuclear umbrella, countries such as France, Japan, and Germany did not need massive defense establishments, freeing capital and energy for commercial advancement. Military power in the 1990s may play an even smaller role promoting, protecting,

and enhancing the security of nations. The battlefield of the foreseeable future is becoming economic and possibly environmental, rather than military. Because the United States has devoted so much money to the defense effort, the nation needs to marshal resources to improve education, basic scientific research, industrial development, resource conservation, and intelligence collection and dissemination to prepare for the marketplace which is tomorrow's battlefield.

The United States entered the 1990s with an enormous national debt, a serious trade imbalance, a low individual savings rate, a deficient public education system, a profound drug problem, a recession, the lowest level of voter participation among the democracies, and defense and intelligence establishments rooted solidly in the past rather than the needs of the future. In the words of Senator Boren:

> Where do we stand in terms of the economic strength of this country? In a very different position than we stood in 1950 at the beginning of the Cold War, when we had nine of the largest banks in the world — now we have none of the top 20 banks in the world — when we had 70 percent share of world assets and world markets, now we're down in the 18 and 19 percent range. And so we have an urgent need to repair the economic strength of this country if we're going to play a role in the next century — a leadership role — as great an impact on the world as we've played in the last century.[17]

The European Community, a united Germany, Japan, and the Four Dragons of the Pacific Rim — Taiwan, Hong Kong, Singapore, and Korea — will supplant the Soviet Union as the chief economic threats or rivals to the United States. To meet this challenge, the United States has a capability of great potential that it has not ever fully utilized — its vast and powerful resources in information and intelligence.

American intelligence sources, methods, and organizations were critical to containment of the Soviet Union and furthering of peace and democracy during the past four decades. Decisions about selling grain to the USSR or pursuing disarmament were affected by the information and intelligence available to U.S. leaders. These resources now can affect America's economic prosperity in the next four decades of keen competition among Japan, the Four Dragons, the European Community, and the United States. The strategy of containment is giving way to a strategy of successful economic competition.

INFORMATION AND INTELLIGENCE

Few nations have a more comprehensive information industry than the United States. Both public and private sector information and research industries (news media, trade groups, interest groups, and research services) are international in scope and enormous in scale. The government has a massive investment in data

collection, analysis, and the dissemination of information, some of it produced by the various agencies of the Intelligence Community. The problem is that much of the information useful to business and commercial activities is not routinely or readily available to them. U.S. business and commerce rely almost exclusively on information gleaned from the information "market place" of the private sector. Though quality information is available from this "market place," it is neither as complete nor timely as that developed by, for instance, Japan's Ministry of International Trade and Industry (MITI) or by the intelligence services of many other nations.

Another problem is that excellent information is in a sense one of America's most valuable "crops." As Michelle Van Cleave of the Office of Science and Technology put it, "While technology proliferation has made information more available, it has also made information more vulnerable."[18] Numerous foreign governments, international businesses, criminal cartels, and terrorist organizations have within their reach sophisticated tools for manipulating federal and private-sector data bases. Furthermore, in such countries as Japan and France the government appears to funnel information freely — unclassified, proprietary, and even classified information — to their national businesses for the greater national good. Again Ms. Van Cleave:

> Hostile intelligence interests are not limited to national security and foreign policy secrets, but increasingly encompass business and financial data as well. Nor are the East Bloc countries the only powers that seek American business data. What many may not realize is that other nations frequently share this data with their private businesses both formally and informally — competitors of U.S. commerce and industry.[19]

MITI's role in fostering economic activities, encouraging market research, and pursuing markets has no real equal in the United States.[20] Tokyo's diplomacy is likewise centered on economics, whereas Washington's is focused on politics and defense issues. In this respect the United States is significantly behind the Japanese.

The Bush administration took steps recently to help AT&T in the company's effort to win an Indonesian telecommunication contract against NEC of Japan. The administration entered the competition when it learned that the Japanese government was exerting strong pressure on behalf of NEC with the Indonesian government. In the words of Commerce Undersecretary J. Michael Farren, "In every other country, you see heads of government actively engaged in commercial activities for their companies. If the U.S. government doesn't show an interest [in] making sure the game is played fairly, our firms are at a distinct disadvantage given the way world trade operates today."[21] But the policy of government support for business will be a success only if the goal is to help *all* U.S. commercial and business activities overseas, not just Fortune 500 companies

like AT&T. Revitalizing this policy can begin within the Department of State. Senator Boren suggests why:

> It is extremely important that we begin to bring people into the Foreign Service who have capability in the economic areas; who have degrees, for example, in business; who have experience in business; who understand the importance of using our embassies to develop economic opportunities and economic relationships for our country in the future. . . . We have to change the attitude in our embassies. We can no longer regard the commercial section as something that ought to be in the basement or preferably in an annex that really shouldn't be at the embassy at all. It becomes part and parcel to the total operation and the skill base needed in any kind of diplomatic mission in the country round the world if we're going to spread American influence and have political influence in the future.[22]

SHARING THE CROWN JEWELS: GIVING INTELLIGENCE TO BUSINESS

Japan's embassies provide extraordinary support to its business community. U.S. embassies have an infamous reputation for the low level and quality of support provided to businesses trying to compete for overseas markets.[23] The Department of State has taken only minor steps to remedy this shortcoming. The U.S. government needs to decide which agency (State, Treasury, or Commerce, for instance) is responsible, accountable, and the first among equals to foster U.S. economic interests and competitiveness in the global economy.

Recognized inside and outside the government is the tremendous influence that media outlets such as Cable News Network (CNN) exert on American and foreign leaders. CNN's coverage of the events surrounding Tienanmen Square strongly influenced public and congressional sentiments on China. Likewise the network brought the day to day, and hour to hour events of the Persian Gulf War to Saddam Hussein, the Pentagon, and the world community. The CNN signal is now available to key leaders in the Kremlin as well as most key offices in Washington. CNN is an example of the growth and maturity of information media that now work so very well outside of government controlled press releases and the constraints of foreign censorship. In a sense, CNN operates as a private sector intelligence agency, providing key business and government leaders with "instant" access to news that might influence markets and economic decisions. LANDSAT and French "SPOT" satellite imagery have made "spy" satellite products available on a commercial basis to governments as well as business and non-profit groups. Moscow, for example, had great difficulty in covering up the Chernobyl disaster after news organizations and environmental groups had satellite imagery of the burning facility.

Intelligence contributes to the viability of many goods and services used to compute the Gross National Product. Certainly the analysis of world crops, markets, and economies helps improve agricultural planning, economic forecasting, and market decisions such as grain sales to the USSR. The U.S. government can detect when the Soviet Union's wheat production appears to be far below Soviet projections — and it can pass such information more rapidly to farmers, giving them better planning intelligence. The government should also make available sooner information on environmental pollution, such as the dumping of toxic wastes, and earth resource treaty violations, such as the illegal fishing activities of foreign fishing fleets. For example, people along the Gulf Coast need to know of toxic waste discharges into the Caribbean or Gulf of Mexico by Cuba or Mexico, the nation in general needs to be advised when Japan exceeds treaty limits on the catching, killing or importation of endangered species, and the U.S. fishing industry has a crucial interest in knowing of the intentions or acts of foreign fleets such as Poland's or South Korea's to violate international agreements on catch limits.

The United States should offer its remote sensing and imagery systems for use by industry, universities, and private business. To do so is no more shocking than allowing corporations to launch rockets and orbit satellites or to develop and test private space launch vehicles. The successful launch of the privately developed Pegasus vehicle and two satellites on 5 April 1990 was a major advance in the commercialization of space and launching of satellites.[24] Giving remote sensing and imaging systems to business is no more shocking than the proposed Open Skies treaty between NATO and Warsaw Pact countries, that if ratified, will allow 23 nations surveillance rights over Europe, North America, and the USSR. Serious consideration should be given also to using America's remote sensing technology to foster commerce and economic activities.[25] To do so would not be an immoral linking of government and industry that runs counter to U.S. free market principals. American industries should have access through users' fees to many forms of intelligence currently withheld from them. The United States needs to provide the same high quality support that other governments, such as the Japanese and French, provide to their industries. In this decade Japan will undoubtedly orbit remote sensing or intelligence collection satellites. Is there any doubt that they will be used to enhance and further Japan, Inc.?

Improved intelligence on friendly nations such as Japan and the members of the European Community will become as important in the 1990s as U.S. knowledge of what was going on within the Soviet Union in the 1980s. Shifting the emphasis of the intelligence community away from an exclusive emphasis on defense and politics to a more balanced approach on economics, politics, and defense will be difficult. But, the world-wide information explosion means that much of the information needed to drive political and economic decisions will be

available from open sources in the 1990s. Information gathering and intelligence collection analysis by non-governmental activities will increase, particularly in scientific, economic, environmental, and cultural areas. News services such as the Associated Press, financial research organizations such as those that are parts of international banks, trade groups such as the U.S. Automobile Manufacturers Association, and environmental organizations such as Greenpeace will for the most part overtly gain and analyze information. This information can become a greater basis for both government and non-governmental decisionmaking, and, in concert with government intelligence, contribute to U.S. security and prosperity.

A DEPARTMENT OF DEFENSE ROLE IN ECONOMIC INTELLIGENCE

Spies, satellites, listening posts, overt collection, covert collection, and intelligence analysis will remain major factors in the relations of the superpowers and most of the other nations of the world. In fact, they may surpass the defense forces of the United States and the USSR in importance in "winning the peace." But in the 1990s these capabilities will be or should be targeted against different aspects of superpower relationships than they were in the 1980s. In the 1990s, U.S. security and national interests will need intelligence on the emerging technologies of countries such as Japan or Czechoslovakia, the political leanings of ethnic groups in Yugoslavia or Thailand, the direction of extremist or fundamental religious groups in Iran or Indonesia, and the locations where the French or Estonians are dumping toxic or radioactive waste — as well as knowledge of the Soviet Strategic Rocket Forces. The U.S. Intelligence Community — whose resources, agencies and heritages are dominated by work on the armed forces, government, and economy of the Soviet Union — recognize that there is a greater world out there filled with challenges and opportunities for the United States that require their taking a new view of intelligence. CIA Director Webster, as head of the U.S. intelligence community, recognized this capability and put together a task force on international economic competition.[26] The President's Foreign Intelligence Advisory Board probably will also delve into the same issue.

The reconnaissance, surveillance, signals intelligence, photographic intelligence, and human intelligence resources of the Department of Defense (DoD) are useful in a variety of missions from tracking earth resources to the activities of foreign economic activities. A majority of the intelligence manpower and technical collection means are within DoD: the National Security Agency, the Defense Intelligence Agency, the intelligence elements of the military services, and other DoD offices for collection of specialized national foreign intelligence.[27] These resources are already supporting the nation's war on drugs. In essence, DoD is now working against commercial and business activity — the

production, transportation, and distribution of illegal drugs. After a long battle with Congress over getting involved in the drug war, DoD has committed its multifaceted assets to this national priority. These intelligence assets are equally available to information gathering on other economic activities posing a threat to the nation.

COUNTERINTELLIGENCE

While the United States is only beginning to debate the idea of using its intelligence to economic advantage, other countries are already heavily involved in intelligence collection to support their economies. Truly, the growth in size and sophistication of the foreign intelligence threat to America's public institutions and business sector represents a strategic threat significant to our economic vitality. The most pervasive intelligence threat continues to be the KGB. KGB collection efforts can be expected to increase as commercial exchanges, business contacts, and technology transfer between the USSR and United States increase — particularly since President Bush and President Gorbachev signed a trade agreement during their 1990 summit meeting in Washington.[28] Vladimir Kryuchkov, formerly head of the KGB and member of the Communist Party's ruling Politburo, said quite clearly that Soviet business firms will be helped by the KGB:

> Western companies have many years of experience of commercial operations. Many of them have their own intelligence and counterintelligence services. They were forced to introduce them by competition. Our companies that are gaining access to the external market do not have such services, and since they have little experience they are vulnerable. I believe the KGB must help them acquire appropriate experience.[29]

Particularly vulnerable to exploitation are American use of computers and telephones, especially cellular telephones. Tapping into such systems is not a sophisticated undertaking. The Soviet Union continues to improve the telecommunication intercept capabilities of its embassies and its very active communication intercept facilities in Cuba. To measure precisely the economic harm caused by such foreign intercepts is difficult, but, without question, its dollar value and impact on U.S. economic viability — considerable now — will increase.

According to Federal Bureau of Investigation Director William S. Sessions, glasnost and perestroika have not in any way decreased Soviet espionage activities against the United States:

> While current U.S.-Soviet relations represent an unprecedented climate of cooperation, the FBI has documented the reality that the Soviet intelligence operations have increased in sophistication, scope, and number, and it is our assessment that Soviet espionage activity will continue to increase in the future. However, there is an inaccurate public perception that events in the Soviet Union equate to a decreasing intelligence threat to our nation. Accordingly, this has created an environment in which intelligence operations are easier for the Soviets to initiate, harder for the FBI to identify and neutralize, and increasingly more difficult for the FBI to explain to the public and some sectors of government the threat of Soviet intelligence activities.[30]

Much work remains to create a counterintelligence effort that protects government, scientific, and business secrets from exploitation by foreign governments and businesses. The fall of the Berlin Wall has substantially altered the spy game between the USSR and the West. Alex Leamas would not have a wall to climb if John Le Carré's *The Spy Who Came In From the Cold* were set in the 1990s. But other Leamases will be serving both governments and businesses. We should anticipate that the KGB will step up its already high level of espionage to obtain technology and economic information that will aid the rebuilding of the Soviet economy. A major alteration to the spy game is that the USSR may no longer control and direct the efforts of the intelligence services of the Eastern European countries.[31]

One of the more pressing problems facing the United States is the espionage threat posed by the explosion in foreign visitors and immigrants. Now that the Cold War is considered over, an additional flood of people is entering the United States as nonimmigrants from Eastern Europe and the USSR. A major portion of the burden of protecting American businesses and commerce from espionage falls on the shoulders of the FBI, but the number of FBI agents is inadequate to handle the counterintelligence threat posed by this increase in the number of foreign government officials, businessmen, and tourists entering the country. Since 1980, the number of bureau agents has increased by only 24 percent — from 7,885 to 9,801.[32] This increase in personnel over the last decade is dwarfed by the increase in the number of foreign visitors entering the United States during the same period — from 11.7 million nonimmigrants in 1981 to an estimated 18 million in 1990, a 54 percent increase. Knowing which of these millions are engaged in espionage is important. With its agents spread thin by work on six publicly-stated priority programs (organized crime, drug enforcement, counterterrorism, white-collar crime, crimes of violence, and counterintelligence), the bureau is hard pressed to track those millions.[33] Furthermore, growing competition in the global economy may well make white-collar crime and foreign counterintelligence even greater priorities for the FBI in the years ahead. Likewise, the counterintelligence assets within DoD and the

armed services are not keeping pace with the expanded numbers and technical capabilities of foreign intelligence personnel.[34] We can assume that the counterintelligence efforts of industry are likewise in serious need of overhauling and upgrading.

In 1988, the Soviet Union issued 27,592 visas for travel to the United States. In 1989 that figure exceeded 50,000. Add to this increase the possibility of up to 70,500 emigres from the Soviet Union, an explosion in the number of aliens from the USSR that the FBI has to be concerned about.[35] The Peoples Republic of China (PRC) also uses nonimmigrants and immigrants for espionage. The numbers of PRC nationals in the United States in 1989 exceeded those from the USSR. The PRC had more than 2,600 diplomatic and commercial officials in the United States, more than 8,000 delegations with about 25,000 members, 40,000 students and scholars, in addition to the 20,000 PRC emigres allowed to enter the United States each year. In the words of FBI Director Sessions, "This large presence of PRC nationals creates a tremendous need for a counterintelligence response as the FBI has documented the widespread use of these PRC nationals by the PRC government for intelligence collection."[36] The PRC is likely to find the United States fertile ground for obtaining industrial, technological and commercial secrets from U.S. and foreign businessmen and firms operating on American soil. China probably cannot resist the opportunity to gain information from U.S., Japanese, and European firms competing on America's economically rich but security poor shores.

THE FUTURE

As the United States reduces the size of its military defenses, particularly those tied to land warfare in Europe, it should seriously look at increasing the ranks of the FBI. Recent espionage, such as the Walker spy case, resulted in serious strategic damage to American national security. Judge Sessions again: "This damage effectively nullified the benefits of huge expenditures in defense and intelligence collection programs and will require massive additional expenditures if these losses are to be rectified."[37] In the 1990s, more John Walkers, Jerry Whitworths, and Jonathan Pollards will probably be trading America's secrets for money. But in this decade they will most likely trade industrial, commercial, and technological secrets in addition to defense secrets. The recipients of this information will not be just the USSR or Israel but other nations who are economic rivals — as well as multinational companies whose allegiance is at times hard to determine. Both the U.S. government and American industries should be prudent enough to thwart or neutralize this threat as soon as possible.

A strategic advantage will go to the nation that most rapidly adjusts to the economic challenges of the future. The Executive Branch and Congress —

despite continuing deliberations on the federal budget, the so-called "peace dividend," and major revisions to the armed forces — ought not to forget the necessary debate on strengthening intelligence. As a nation, the United States must decide what will contribute more to its well-being during the next decade: another aircraft carrier or combat division, or an increase in its diplomatic, intelligence, and internal security forces. In the 1980s, the United States chose aircraft carriers and combat divisions, but in the 1990s the best choice might be to devote resources to aggressive diplomatic, scientific, economic, and intelligence programs. Adding a few more diplomats in Europe, Africa, Asia, and the Americas, a few more FBI agents in Silicon Valley, a few more CIA agents in the Middle East, and a few more customs agents in Miami is an alternative that should be explored.

The world is changing quickly. The United States needs a leaner and meaner defense establishment to free up resources for pursuits that improve the nation's economic well-being as well as the environment. Also needed is an intelligence and information gathering apparatus that supports economic activity as well as defense and political needs. The second, in fact, supports the first. One billion dollars worth of FBI, NSA, and CIA manpower may add more to U.S. security than does one billion dollars worth of weapons. That amount of money would buy the nation only a few weapons, given today's high prices on sophisticated equipment, but it *could* buy an entire "corps" of men and women to work the complex intelligence, counterintelligence, or counternarcotics programs critically important to security and growth. In essence, the United States must roll up its sleeves, tighten its belt, and get to work on its greatest problem — economic competitiveness. A well-financed, high-quality intelligence program aimed at economic competitiveness might be the most important new development in U.S. national security for the years ahead.

REFERENCES

[1]Safire, William, "Spies of the Future," *The New York Times*, 16 March 1990, sec. A, p. 35.

[2]Boren, David, U.S. Senator, speech before the National Press Club, 3 April 1990. Transcript provided by Senator Boren's Office.

[3]Naisbitt, John, and Patricia Aburdene, 1990, *Megatrends 2000*, William Morrow and Co., New York, pp. 21, 29.

[4]The figure 49 billion dollars (49,002 million) comes from the Bureau of the Census, seasonally unadjusted data titled "1989 Monthly and Cumulative Trade Statistics." See also Steven R. Weisman, "The Negotiations with Japan Get Personal," *The New York Times*, 1 April 1990, sec. 4, p. 1; Sylvia Nasar, "Believe It Or Not, Japan Is Changing," *U.S. News and World Report*, 26 February 1990, p. 49; and Stuart Auerbach, "Mosbacher Blunt on Japanese," *The Washington Post*, 22 March 1990, sec. E, p. 1.

[5]White, Theodore H., "The Danger from Japan," *The New York Times Magazine*, 28 July 1985, pp. 18–59. This is an excellent essay on why Japan's trade tactics pose a threat to the United States. The essay profoundly shocked the Japanese as it was penned by an internationally respected journalist and was prominently featured in *The New York Times*. See Nagayo Homma, "The American Revisionists' Hostile View of Japan," *Economic Eye — A Quarterly Digest of Views from Japan*, Winter 1989, p. 19–21.

[6]Webster, William H., Director of Central Intelligence, remarks to the Jefferson Club, University of Missouri, 27 April 1990, Public Affairs–Central Intelligence Agency, Washington.

[7]An excellent description of the Toshiba case and the struggle within the United States government to make a case against Toshiba is found in "Taking Toshiba Public," a Harvard University, Kennedy School of Government, 1988 case study written by Anna M. Warrock and Howard Husosk. The case study was developed with support from the Central Intelligence Agency.

[8]CIA Director Webster, remarks at the World Affairs Council of Boston, Boston, Massachusetts, 12 April 1990, Public Affairs–Central Intelligence Agency, Washington.

[9]Senator Boren, speech before the National Press Club, 3 April 1990. See also George Lardner Jr., "Boren Urges Intelligence Upgrades," *The Washington Post*, 4 April 1990, sec. A, p. 7.

[10]CIA Director Webster, remarks to the Los Angeles World Affairs Council, Los Angeles, Calif., 19 September 1989, Public Affairs–Central Intelligence Agency, Washington.

[11]O'Lone, Richard G., and Eiichiro Sekigawa, "Japan Will Have 8–10% Share of 767-X Program," *Aviation Week & Space Technology*, 23 April 1990, pp. 18–19.

[12]"Daimler-Benz, Mitsubishi Discuss Closer Business Ties," *Aviation Week & Space Technology*, 12 March 1990, p. 24; and "Mitsubishi, Daimler-Benz Agree To Aerospace Research Alliance," *Investor's Daily*, 20 April 1990, p. 19.

[13]According to Scott Stevens, a spokesman for SEMATECH, the sale of SEMI-GAS has substantial national security implications as it would give Japan control over a critical element of the semiconductor manufacturing process. See also "SEMATECH Fights To Block A Sale To Japanese," *Investor's Daily*, 20 April 1990, p. 19. SEMATECH (SEmiconductor MAnufacturing TECHnology) is a consortium of 14 U.S. semiconductor manufacturers determined to provide U.S. industry the domestic capability for world leadership in semiconductor manufacturing. DoD helps fund SEMATECH and DARPA represents DoD on the SEMATECH Board. "SEMATECH is a unique example of industry/government cooperation forged in an alarming environment. Due to Japanese targeting and illegal dumping practices, the United States lost its technical and economic advantage in the semiconductor industry to foreign competitors," from the SEMATECH Handbook 1989.

[14]The economic union of the two German states occurred in 1990. Wages and pension benefits exchanged at a 1-to-1 rate. This will cause Bonn to increase the money supply by about 10 percent but this potentially inflationary process should be offset by the

grafting onto the FRG economy the GDR economy which is roughly 10 percent the size of the FRG. German and U.S. officials were generally optimistic that the economic and currency merger will have only a minimal effect on German inflation partially because of their confidence in the monetary controls of the Bundesbank. The German central bank (Bundesbank) is most concerned about inflation and is likely to control interest rates to hold down inflationary pressures. Interviews with John Sammis, Department of State, Office of Central European Affairs and Joseph Eichenberger, Department of the Treasury, 20 June 1990. See also Charles Fenyvesi, Editor, "Washington Whispers: What the U.S. May Pay for German Unification," *U.S. News & World Report*, 23 April 1990, p. 18, and Marc Fisher, "Two Germanys Set July 1 as Date for Monetary Merger," *The Washington Post*, 25 April 1990, sec. A., p. 33.

[15]CIA Director Webster, remarks to the Los Angeles World Affairs Council, 19 September 1989.

[16]Naisbitt and Aburdene, *Megatrends 2000*, p. 29.

[17]Senator Boren, Speech to the National Press Club, 3 April 1990. See also Margaret Sapiro and Fred Hiatt, "Tokyo's Vast Economic Might Still Growing Around World," *The Washington Post*, 13 February 1990, sec. A, p. 1.

[18]Van Cleave, Michelle K., Assistant Director for National Security Affairs, Office of Science and Technology Policy, Executive Office of the President, remarks to the Information Security Seminar for Business and Government, New York, 18 October 1989.

[19]Ibid.

[20]The argument is made that the Pentagon through the Defense Advanced Research Project Agency, and funding of national laboratories and contractor independent research and development is the U.S. equivalent of Japan's Ministry of International Trade and Industry and that since World War II we have had an unacknowledged industrial policy — the Pentagon. See Robert Kuttner, "Industry Needs A Better Incubator Than the Pentagon," *Business Week*, 30 April 1990, p. 16. For gaining insights into the MITI see Chalmers Johnson, 1982, *MITI and the Japanese Miracle*, Stanford University Press, Stanford, Calif. This book is a history of the Ministry of Trade and Industry. The final three chapters are particularly useful in understanding the role of the MITI in pursuing technologies, markets, and Japanese industrial policy.

[21]Auerbach, Stuart, "Bush Leads Bid to help AT&T in Indonesia Pact," *The Washington Post*, 14 February 1990, sec. D, p. 1. "In the AT&T case, top administration officials said that they acted following reports from Jakarta that Japan might be using its $2.1 billion in annual aid to Indonesia as leverage to swing the contract to NEC."

[22]Senator Boren, speech before the National Press Club, 3 April 1990.

[23]Many U.S. businessmen want nothing to do with the American embassies. They never seek U.S. official contacts or help. This is understandable and appropriate as many businesses compete quite well in foreign markets without the assistance of their government. But there are foreign markets such as those of Japan which are generally impenetrable in many sectors without government assistance.

[24]Smith, Bruce A., "Pegasus Completes First Operational Flight, Places Payload in Earth Orbit," *Aviation Week & Space Technology*, 9 April 1990, pp. 23–23. "Pegasus was developed in a privately funded joint venture between Orbital Science Corp. and Hercules Aerospace Inc. which together funded the nonrecurring costs for development. The Defense Advanced Research Projects Agency (DARPA) has funded nonrecurring costs for initial launch vehicles and demonstration and test and evaluation programs." The three-stage Pegasus vehicle was carried to 43,000 ft by the NASA Ames-Dryden Flight Research Facility B-52 where it was launched. Though Pegasus is a "private sector" venture it is a venture that rides on the back (the belly to be precise) of NASA with a "boost" from DARPA also. See also Bruce A. Smith, "Pegasus Booster Proves to Be Highly Accurate in Its First Launch," *Aviation Week & Space Technology*, 16 April 1990, pp. 24–25.

[25]Remote sensing would also be valuable in analyzing the environment. "Each day thousands of aerial photos and multisensor images of Earth are acquired from platforms in the atmosphere or space. These images constitute valuable sources of data for analyzing environmental conditions and for making recommendations about alleviating Earth resource problems. Aerial photography and multisensor imagery have seven important roles to play relative to protecting life on this planet: (1) providing an historical record, (2) as an inventory and assessment tool, (3) a mapping and charting source, (4) a change detection vehicle, (5) a predictive instrument, (6) a planning and management vehicle, and (7) serendipitous effects." Dino A. Brugioni, "The Impact and Social Implications of Commercial Remote-Sensing Satellites," *Technology in Science*, Vol. 11 (1989), p. 1.

[26]CIA Director Webster, remarks to the Jefferson Club, University of Missouri, 27 April 1990.

[27]The Intelligence Community refers in aggregate to those Executive Branch agencies and organizations that conduct the variety of intelligence activities which comprise the total U.S. national intelligence effort. The Community includes the Central Intelligence Agency; the National Security Agency; the Defense Intelligence Agency; offices within the Department of Defense for collection of specialized national foreign intelligence through reconnaissance programs; the Bureau of Intelligence and Research of the State Department; intelligence elements of the military services, the Federal Bureau of Investigation, the Department of the Treasury, and the Department of Energy; and the Intelligence Community Staff." *Central Intelligence Agency Fact Book on Intelligence*, May 1989, p. 19.

[28]Congress must approve the trade agreement. The Bush administration will not forward the trade agreement until the Soviets codify free emigration, thus allowing the president to waive the 1974 Jackson-Vanik Amendment by certifying that Soviet citizens can emigrate freely. It is also doubtful that the U.S. Congress will approve the trade agreement until there is clear evidence of Soviet actions to allow the independence of the Baltic States, particularly Lithuania. With or without a trade agreement or even Most Favored Nation status for the USSR, KGB efforts and activities against the United States will probably increase. Van Cleave, "A National Perspective on Corporate Information Security;" Stuart Auerbach, "U.S., Soviets

Complete Bulk of Trade Accord," *The Washington Post*, 27 April 1990, Sec. A., p. 31, and interview with Michael Brownrigg, Office of European Affairs–United States Trade Representative, 20 June 1990.

[29](Reuters) Moscow, "Soviet Firms to Get Some Help from the KGB," *The Washington Times*, 16 May 1990, sec. C, p. 1. See also James Cox, "KGB Spies a New Job: Consulting," *USA Today*, 16 May 1990, sec. B, p. 1.

[30]Sessions, William S., Director, Federal Bureau of Investigation, opening statement before the Subcommittee on Civil Rights, Committee on the Judiciary, United States House of Representatives, 5 April 1990, p. 9.

[31]"Our evidence shows that espionage against the United States has not diminished. Emerging East European democracies are struggling to control intelligence and security services that remain loyal to their KGB masters." Senator Boren, "New World, New CIA," *The New York Times*, 17 June 1990, sec. E, p. 21. See also Neil Munro, "Spies Coming in From the Cold: East Bloc Officers to Trade Information to CIA for Life in the U.S.," *Defense News*, 5 March 1990, p. 3.

[32]Hanson, Bob, Federal Bureau of Investigation, interview 24 April 1990.

[33]FBI Director Sessions, opening statement before the Subcommittee on Civil and Constitutional Rights, p. 3.

[34]DeGraffenreid, Kenneth E., "Countering Hostile Intelligence Activities as a Strategic Threat," in *Report on a Conference of Security, Counterintelligence, and Strategic Experts on Counterintelligence and Security Requirements for National Security*, National Strategy Information Center, Washington, September 1989, p. 7.

[35]FBI Director Sessions, opening statement before the Subcommittee on Civil and Constitutional Rights, p. 9.

[36]Ibid. p. 10.

[37]Ibid. p. 10.